
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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VANADIUM IN JUNE 1997

The total reported consumption of vanadium in June decreased 14% from that reported for May.

U.S. ferrovanadium prices during June ranged from \$8.65 to \$8.90 per pound vanadium content compared with \$8.75 to \$9.00 in May. The range for European ferrovanadium prices

was \$18.40 to \$19.30 per kilogram vanadium content in June. In May, European ferrovanadium prices ranged from \$18.30 to \$19.00. For vanadium pentoxide, the June range was \$3.75 to \$3.95 per pound, while in May it was \$3.73 to \$3.95.

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM 1/

(Kilograms, contained vanadium)

	1996 p/		1997			
	January - December		May		June	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium 2/	4,090,000	311,000	346,000 r/	278,000 r/	293,000	242,000
Oxide	13,400	6,610	1,120	6,780	1,120	6,780
Vanadium-aluminum alloy	W	11,300	W	11,000 r/	W	10,200
Vanadium chemicals 3/	W	W	W	W	W	W
Other 4/	396,000	5,460	45,300 r/	5,470	43,100	4,520
Total	4,500,000	334,000	392,000 r/	301,000 r/	337,000	263,000

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

3/ Includes vanadates, chlorides and other specialty chemicals.

4/ Includes other vanadium alloys, vanadium metal, and items indicated by symbol "W."

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE 1/

(Kilograms, contained vanadium)

	1996 p/ January - December	1997		
		May	June	Year to date
Steel:				
Carbon	1,640,000	120,000 r/	84,500	747,000
High-strength low-alloy	933,000	87,000 r/	82,500	504,000
Stainless and heat-resisting	21,600	1,610	1,610	10,200
Full alloy	1,050,000	86,700 r/	82,200	478,000
Tool	409,000	W	W	261,000
Unspecified	--	--	--	--
Total steel	4,060,000	295,000 r/	251,000	2,000,000
Cast irons	W	W	W	W
Superalloys	17,300	1,310 r/	1,590	8,130
Alloys (excluding steels and superalloys):				
Cutting and wear-resistant materials	245	20	20	122
Welding and alloy hard-facing rods and materials	W	W	W	W
Nonferrous alloys 2/	W	W	W	W
Other alloys	W 3/	--	--	--
Chemical and ceramic uses:				
Catalysts	W	W	W	W
Other 4/	W	W	W	W
Miscellaneous and unspecified	427,000	96,100 r/	84,700	253,000
Total consumption	4,500,000	392,000 r/	337,000	2,260,000

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes magnetic alloys, except for 1996.

3/ Magnetic alloys was included in this category for 1996.

4/ Includes pigments.

TABLE 3
U. S. EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY, FERROVANADIUM AND
VANADIUM PENTOXIDE (ANHYDRIDE) IN MAY 1997 1/

(Kilograms, vanadium content unless otherwise specified)

Material and country	Quantity	Value	Year to date	
			Quantity	Value
Aluminum-vanadium master alloy: 2/				
Austria	--	--	13,800	\$161,000
Canada	--	--	24,300	306,000
China	--	--	15,000	265,000
Germany	4,000	\$54,000	17,200	263,000
India	105	3,060	105	3,060
Japan	130	2,600	1,180	16,300
Mexico	40,000	519,000	147,000	1,920,000
Spain	625	8,130	625	8,130
United Kingdom	45,100	665,000	99,200	1,600,000
Total	89,900	1,250,000	319,000	4,540,000
Ferrovanadium:				
Canada	31,900	696,000	128,000	2,830,000
Mexico	19,300	539,000	72,800	1,510,000
Total	51,200	1,230,000	200,000	4,350,000
Vanadium pentoxide (anhydride): 3/				
Australia	181	2,560	181	2,560
Austria	--	--	42,800	212,000
Belgium	11,500	97,100	119,000	1,050,000
Brazil	--	--	17,900	133,000
Czech Republic	38,100	307,000	38,100	307,000
France	14,500	108,000	30,600	318,000
Germany	--	--	16,700	117,000
Italy	34,500	254,000	76,600	575,000
Korea, Republic of	--	--	32,400	256,000
Total	98,800	768,000	374,000	2,970,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Gross weight.

3/ May include catalysts containing vanadium pentoxide.

Source: Bureau of the Census

TABLE 4
U. S. EXPORTS OF OXIDES AND HYDROXIDES OF VANADIUM AND VANADIUM METAL
IN MAY 1997 1/

(Kilograms, vanadium content unless otherwise specified)

Material and country	Quantity	Value	Year to date	
			Quantity	Value
Other oxides and hydroxides of vanadium:				
Argentina	--	--	916	\$13,300
Canada	567	\$7,450	86,700	789,000
Colombia	--	--	5,700	44,800
Czech Republic	--	--	3,510	54,900
France	--	--	3,730	41,100
Germany	--	--	11,500	102,000
Indonesia	--	--	4,000	51,900
Israel	--	--	1,260	11,200
Japan	984	8,760	14,700	131,000
Korea, Republic of	--	--	788	7,010
Mexico	--	--	2,820	25,100
United Kingdom	--	--	1,560	6,040
South Africa	--	--	40,400	405,000
Total	1,550	16,200	177,000	1,680,000
Vanadium metal, including waste and scrap: 2/				
Canada	--	--	650	17,700
Germany	2	2,580	2	2,580
Japan	50	6,620	80	10,800
Sweden	1	3,210	1	3,210
United Kingdom	828	13,700	1,660	43,000
Total	881	26,100	2,390	77,300

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Gross weight.

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ALUMINUM-VANADIUM MASTER ALLOY, FERROVANADIUM AND
VANADIUM PENTOXIDE (ANHYDRIDE) IN MAY 1997 1/

(Kilograms, vanadium content unless otherwise specified)

Material and country	Quantity	Value	Year to date	
			Quantity	Value
Aluminum-vanadium master alloy: 2/	--	--	--	--
Ferrovandium:				
Austria	3,240	\$65,600	16,900	\$289,000
Canada	78,900	1,510,000	406,000	6,960,000
China	54,200	915,000	196,000	3,060,000
Czech Republic	--	--	63,800	947,000
France	2,150	47,200	2,150	47,200
Germany	--	--	3,700	72,300
Japan	--	--	465	26,100
South Africa	31,500	548,000	132,000	2,170,000
Total	170,000	3,080,000	821,000	13,600,000
Vanadium pentoxide (anhydride): 3/				
South Africa	53,000	758,000	281,000	3,380,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Gross weight.

3/ May include catalysts containing vanadium pentoxide.

Source: Bureau of the Census.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF OTHER OXIDES AND HYDROXIDES OF VANADIUM AND VANADIUM
METAL, INCLUDING WASTE AND SCRAP IN MAY 1997 1/

(Kilograms, vanadium content unless otherwise specified)

Material and country	Quantity	Value	Year to date	
			Quantity	Value
Other oxides and hydroxides of vanadium:				
South Africa	9,590	\$145,000	98,500	\$1,460,000
Vanadium metal, including waste and scrap: 2/				
Germany	124	9,400	251,000	234,000
Korea, Republic of	--	--	4	3,000
Russia	1,780	90,500	12,800	299,000
United Kingdom	138,000	50,300	138,000	51,800
Total	140,000	150,000	402,000	589,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Gross weight.

Source: Bureau of the Census.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG AND RESIDUES IN MAY 1997 1/

(Kilograms, vanadium pentoxide content)

Material and country	Quantity	Value	Year to date 2/	
			Quantity	Value
Ash and residues:				
Canada	--	--	17,800	\$9,730
Mexico	39,100	\$105,000	257,000	623,000
Netherlands Antilles	--	--	262	2,110
Total	39,100	105,000	275,000	635,000
Ash and residues (not from the manufacture of iron and steel):				
Canada	67,200	58,600	636,000	192,000
Slag, from the manufacture of iron and steel:				
South Africa	--	--	578,000	2,280,000
Other residues: (Not advanced in value)				
Canada	--	--	7,410	6,530

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include revisions to previous month's data.

Source: Bureau of the Census.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS IN MAY 1997 1/

(Kilograms, vanadium content)

Material and country	Quantity	Value	Year to date	
			Quantity	Value
Sulfates:				
Germany	5	\$1,530	5	\$1,530
Vanadates:				
Germany	325	17,600	11,300	169,000
Japan	6	2,720	6	2,720
South Africa	11,400	81,900	57,300	402,000
Total	11,700	102,000	68,600	573,000
Hydrides and nitrides:	--	--	--	--

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.